

Listing of Claims

1. (Currently Amended) A method for illuminating a target point in a real scene, comprising the steps of:

capturing a digital image data of a scene;

identifying ~~image data associated with~~ image coordinates of a target point in the digital image of the scene; and

projecting a light beam at ~~the~~ a target point in the real scene, which corresponds to the target point in the digital image, using the identified image coordinates ~~image data associated with the target point~~.

2. (Currently Amended) The method of claim 1, wherein the step of projecting comprises the steps of:

converting the image coordinates of the target point to light coordinates for directing the light beam; and

processing the light coordinates to direct the light beam to the target point in the real scene.

3. (Original) The method of claim 1, wherein an integrated optical device is used for performing the steps of image capture and light projection.

4. (Original) The method of claim 1, wherein the step of projecting a light beam comprises projecting a laser beam.

5. (Currently Amended) The method of claim 1, wherein the step of capturing the digital image data is performed using an omni-directional camera.

6. (Currently Amended) The method of claim 1, wherein the step of identifying ~~image data associated with a target point in the scene~~, comprises the steps of:

displaying the digital image of the scene; and

selecting a target point in the displayed image of the scene ~~using the displayed scene~~ ;
and

determining image data coordinates corresponding to the selected target point.

7. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for illuminating a target point in a real scene, the method steps comprising:

capturing a digital image data of a scene;

identifying ~~image data associated with~~ image coordinates of a target point in the digital image of the scene; and

projecting a light beam at ~~the~~ a target point in the real scene, which corresponds to the target point in the digital image, using the identified image coordinates ~~image data associated with the target point~~.

8. (Currently Amended) The program storage device of claim 7, wherein the instructions for projecting comprise instructions for performing the steps of:

converting the image coordinates of the target point to light coordinates for directing the light beam; and

processing the light coordinates to direct the light beam to the target point in the real scene.

9. (Currently Amended) The program storage device of claim 7, wherein the instructions for identifying ~~image data associated with a target point in the scene~~ comprise instructions for performing the steps of:

displaying the digital image of the scene; and

receiving as input, image coordinates of a user-selected a target point in the displayed digital image of the scene.

10. (Currently Amended) A system for illuminating a target point in a real scene, comprising:

an image capture device for capturing a digital image data of a scene;

an illumination device for projecting a beam of light at a target point in the scene that corresponds to a selected target point in the digital image; and a

data processing device comprising computer readable program code embodied therein for processing the digital image to identify image coordinates of the selected image data associated with the target point and generating control signals to control the illumination device system to project the beam of light at the target point in the scene.

11. (Original) The system of claim 10, wherein the image capture device and the illumination device comprise common optical properties.

12. (Original) The system of claim 10, wherein the image capture device and the illumination device comprise an integrated device.

13. (Original) The system of claim 10, wherein the illumination device comprises a light-emitting plane.

14. (Currently Amended) The system of claim ~~13~~ 14, wherein the data processing device comprises computer readable program code embodied therein for activating a point source in the light-emitting plane that corresponds to a projection of the target point in the scene on the light-emitting plane.

15. (Original) The system of claim 10, wherein the illumination device comprises a laser beam device.

16. (Currently Amended) The system of claim 15, wherein the laser beam device comprises:

- a laser beam generator;
- a deflector for deflecting the laser beam emitted from the laser beam generator;
- a plurality of motors, operatively connected to the deflector, for positioning the deflector to deflect the laser beam to the target point in the scene.

17. (Original) The system of claim 16, wherein the data processing device comprises computer readable program code embodied therein for generating control signals to control the plurality of motors to position the deflector at an appropriate angle.

18. (Original) The system of claim 10, wherein the image capture device comprises an omni-directional camera.

19. (Currently Amended) The system of claim 10, further comprising :
a display device for displaying the digital image of the scene, and
a pointing device to select a target point from the displayed digital image ~~wherein~~
~~selecting a point on the displayed scene identifies a target point.~~